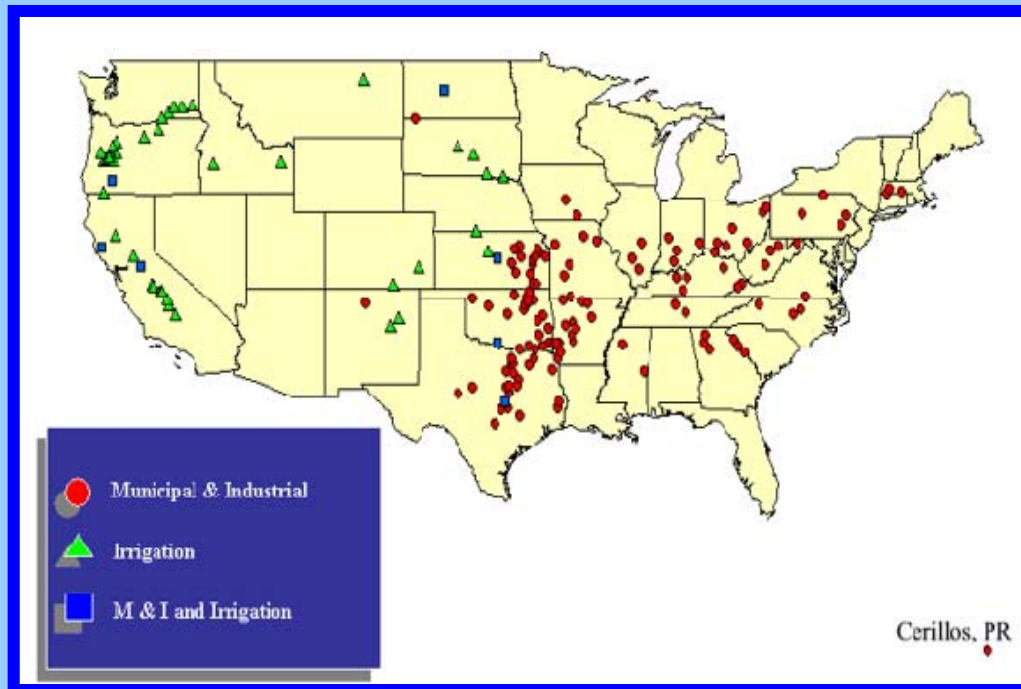




US Army Corps  
of Engineers®

# *The Corps of Engineers Water Supply Program*

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- Authorities, Policies and Procedures
- Scope of Corps WS
- Relationship to HP
- Issues & Challenges

Presented by:  
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**Federal Hydropower Strategic Planning  
Workshop 2008  
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13-14 May 2008**

# **WATER SUPPLY**

## **Primary Authorities**

- Section 6 of the Flood Control Act of 1944  
(surplus water)
- Section 8 of the Flood Control Act of 1944  
(irrigation water)
- **The Water Supply Act of 1958**  
**(storage space)**
- Project Specific Authorities

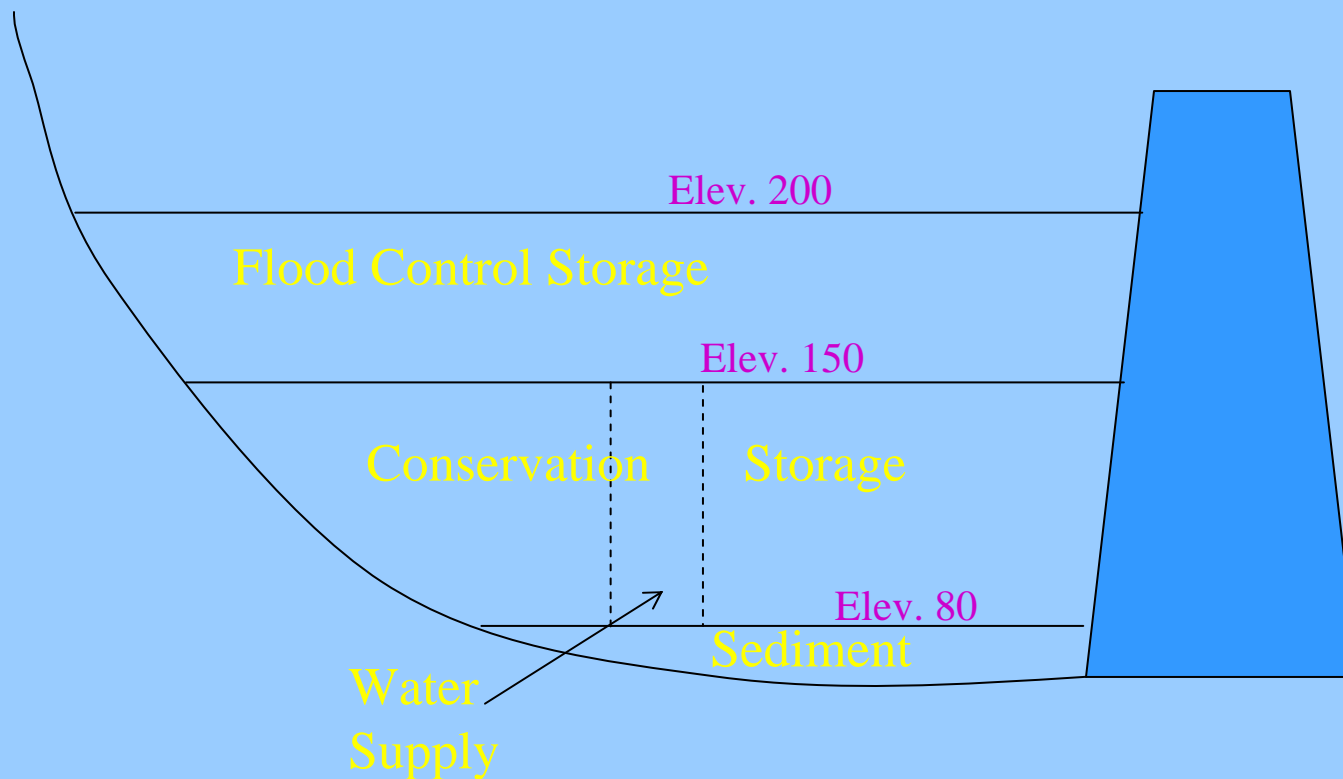
# **WATER SUPPLY**

## **Primary Authority for M&I**

**Title III, 1958 R&HA, “The 1958 Water Supply Act”:  
(Water Supply Storage)**

- **Act states that water supply is primarily a state and local responsibility.**
- **Include M&I water supply storage in new reservoir projects.**
- **Reallocate storage in existing projects to M&I water supply.**
- **Modification of projects to add M&I that would seriously affect other authorized purposes require congressional authorization**
- **All costs to be repaid by the non-Federal sponsor. Time of repayment varies depending on when authorized.**

# Water Supply in a Multipurpose Project



# **WATER SUPPLY**

## **Guidance**

- **ER 1105-2-100 PGN, dated April 2000**
  - ✓ **Paragraph 3-8**
  - ✓ **Appendix E, Section VIII**
- EP 1165-2-1 Policy Digest, dated July 1999
  - ✓ Chapter 18
- IWR Report 96-PS-4 Water Supply Handbook
- IWR Report – Policy Studies- Water Supply Database 2005 Update (Information)

# WS Overview

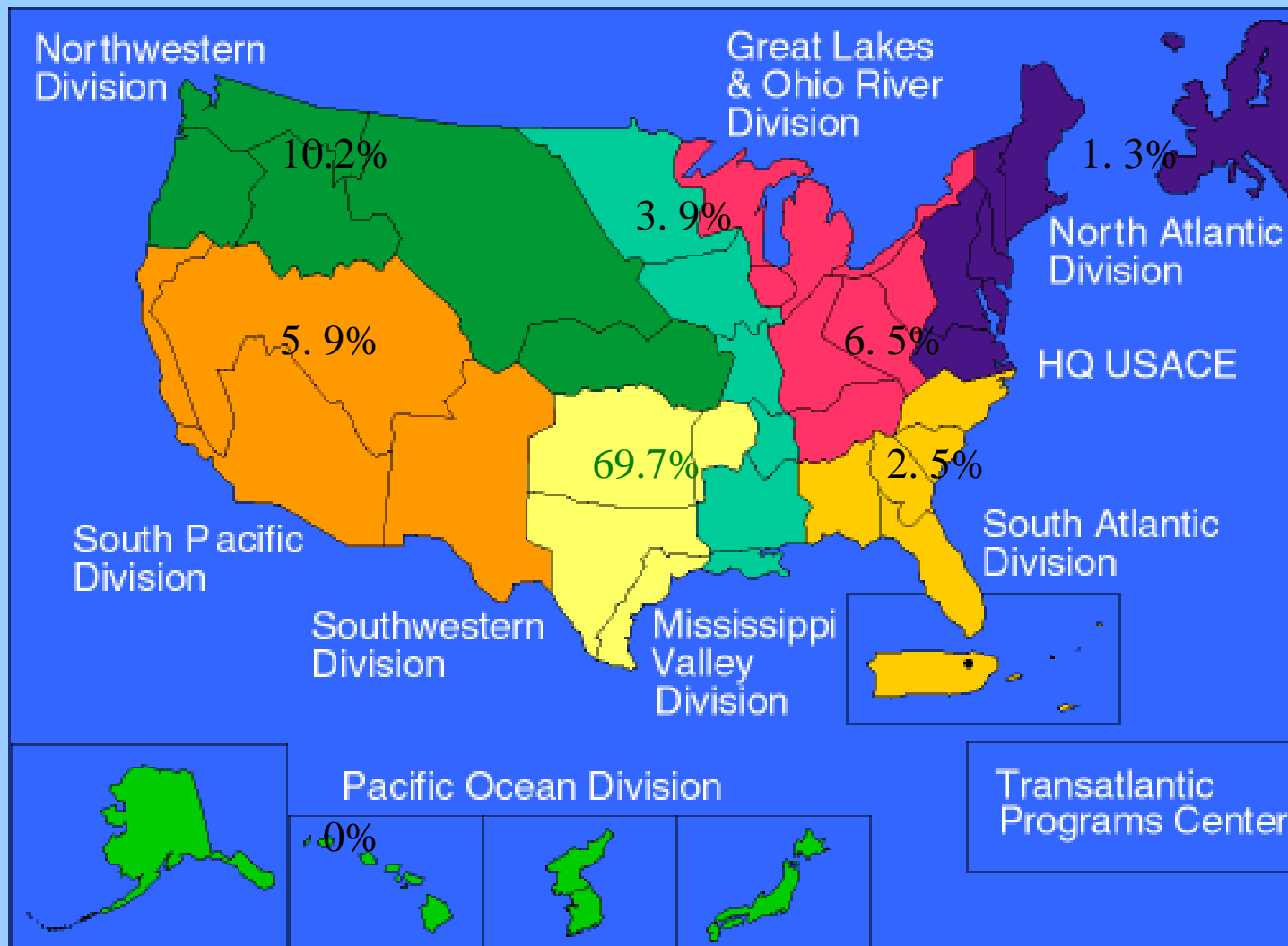
## Municipal and Industrial Water Supply (2007 data)

<b>Storage Space:</b>	<b>9.38 million acre-feet</b>
<b>Reservoirs:</b>	<b>134 reservoirs</b>
<b>Location:</b>	<b>26 States and Puerto Rico</b>
	<b>24 of the Corps 38 districts</b>
<b>Investment Cost:</b>	<b>\$1.28 billion</b>
<b>No. Agreements</b>	<b>316 covering 9.08 million acre-feet</b>

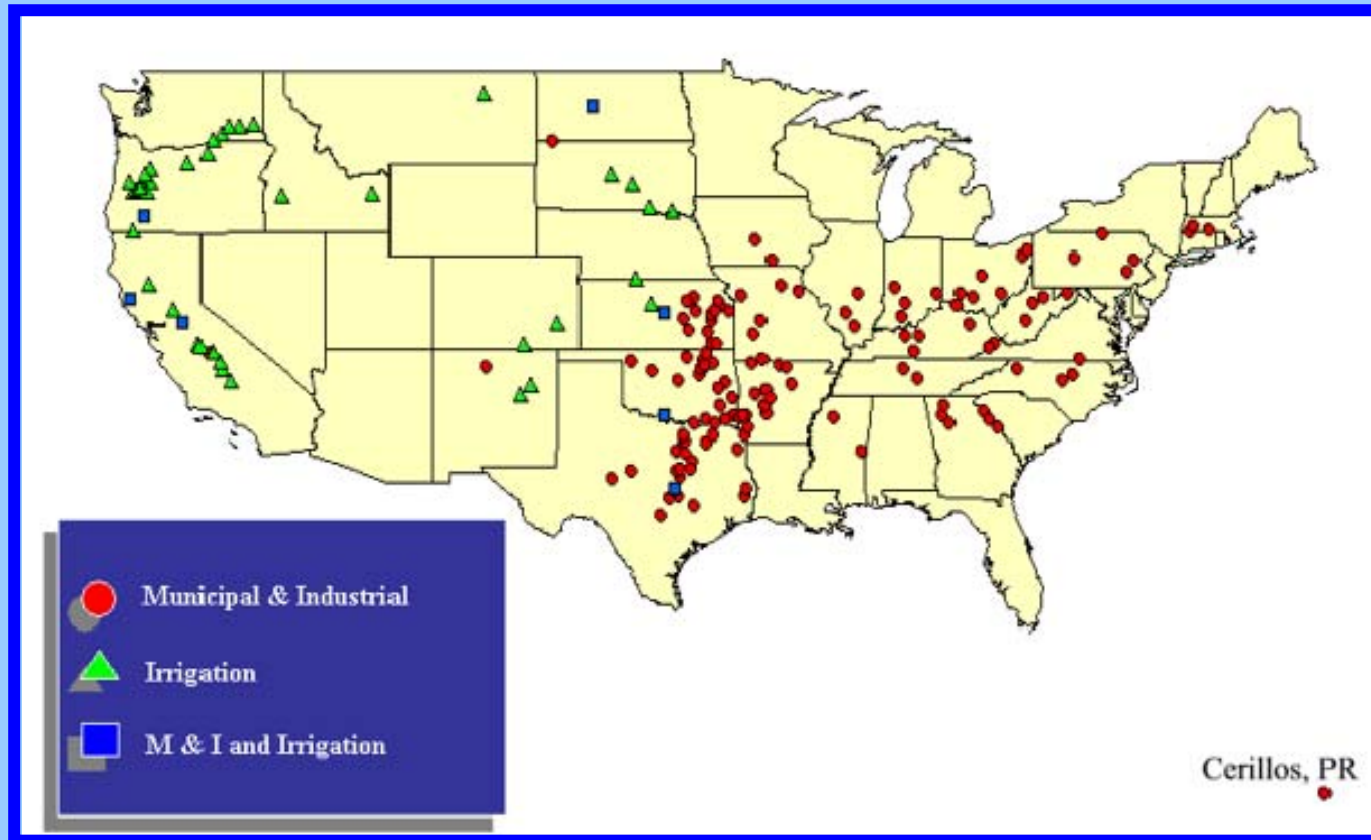
## Irrigation Water Supply (2004 data)

**56.6 million AF of storage for irrigation and other uses in 48  
reservoirs in the West (only 640,000 of which is specific irrigation)**

# Distribution of M&I Storage Space by MSC (%)



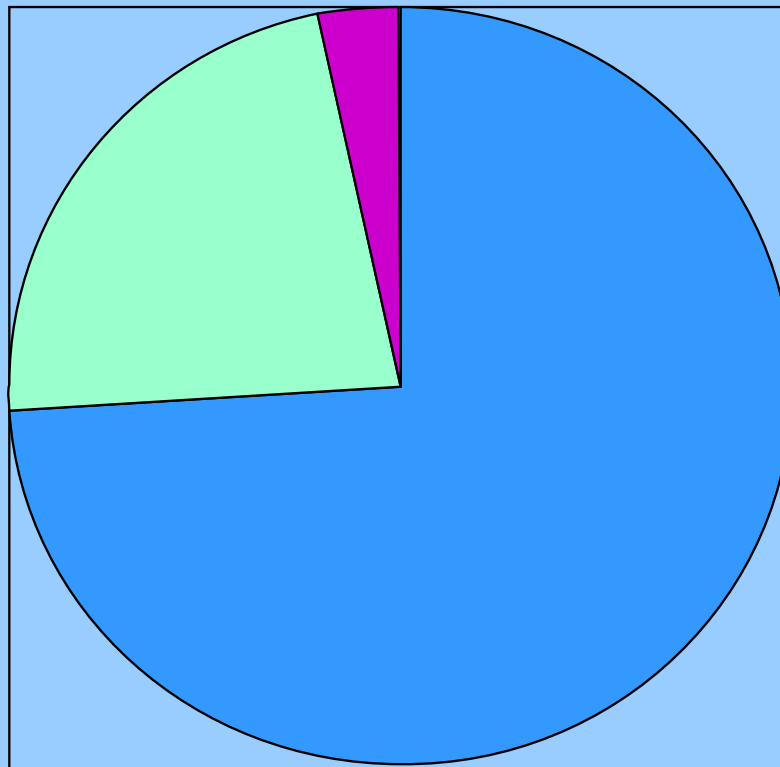
# M&I and Irrigation Projects Location and Data



[www.vtn.iwr.usace.army.mil](http://www.vtn.iwr.usace.army.mil)  
Water Supply / Fast Facts



# Distribution of M&I Storage space by Type of Contract



- Present Use Storage Under Contract (74%)**
- Future Use Storage Under Contract (23.0%)**
- Storage Not Under Contract (3%)**

# WATER SUPPLY

## Reallocation Policy

- Sponsors obtain Permanent Right to Storage
- Cost based on higher of updated cost of storage, revenues foregone, benefits foregone, or replacement costs
- Repayment of Storage Costs over period of 30 years
- Any new construction costs paid upfront
- Share of OMRR&R costs
- Compensation for HP losses where applicable

# Price of Reallocated Storage

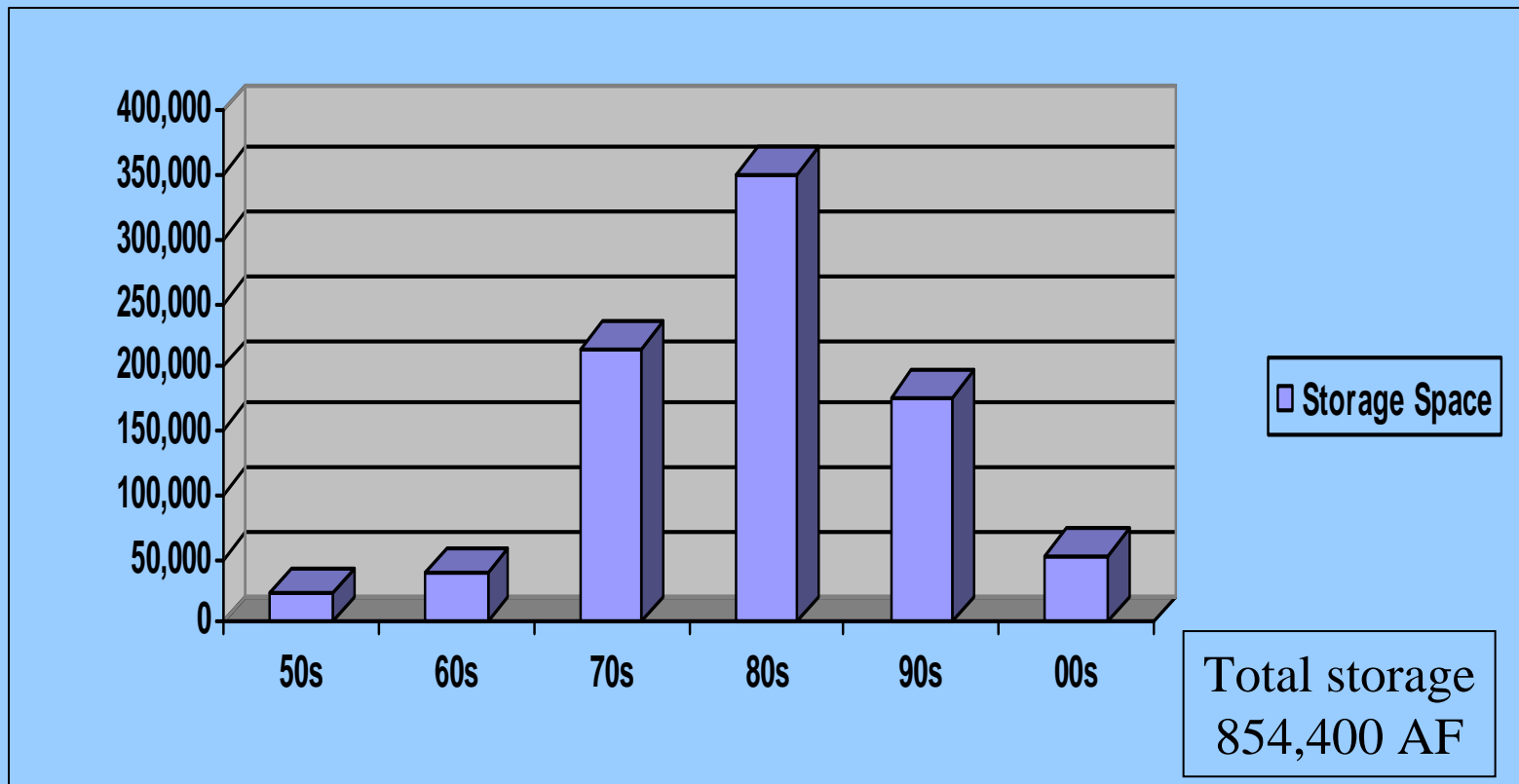
## Highest of:

1. Benefits foregone
  - opportunity costs from economic evaluation
2. Revenues foregone
  - revenues to Treasury lost due to reduced power production (current power rates)
3. Replacement costs
  - cost of replacing flood control
  - benefits foregone for hydropower
4. Updated cost of storage in the Federal reservoir

# Compensation for HP Losses

- Army/Corps Policy is to credit HP losses based on Revenues Foregone, based on current rates charged for HP
- Additional Credit for the costs of make-up power may be made, if power has to be purchased to full fill contract requirements due to reallocation for the duration of existing PMA contracts.

# History of Storage Space Reallocated to Water Supply



# REALLOCATIONS

## at HP Projects

1965 - 2007

- 21 Projects with Federal HP with 3,700 MW of Name-plate Capacity and 14.8 million acre-ft of conservation pool storage space
- 96 WS Contracts for 405,100 acre-ft of Storage Space
- < 3% of Cons\HP Storage
- Total Impacts on HP - ???

## Large Pending Reallocations at Projects with HP

- Lake Lanier, GA – 241,000 acre-ft
- Lake Cumberland, KY – 32,200 acre-ft
- Lake Texoma OK/TX – 105,000 acre-ft
- Would bring total to 783,200 acre-ft at 23  
Lakes and about 4.4% of Cons\HP Storage.

# ISSUES & CHALLENGES

- Increased Demands for Water Supply
- WS Interests wanting lower cost for Reallocated Storage
- Reallocations for Other Uses
  - In-stream flows for Environmental and Recreation Objectives
- Storage Use Accounting
  - Return Flows and Upstream Reservoirs
- Pool Draw-downs for Dam Safety
- Differences in Corps and PMAs



# Differences in Corps and PMAs

- Valuation of Power Losses
  - Corps Uses NED values (current dollars, average availability, power available to all users)
  - PMA Use Financial Based values for their specific customers
- Compensation for Power Losses
  - Corps Uses HP Revenue based values
  - PMAs Prefer Market Based Replacement Cost Values



*Whiskey's  
for drinkin':*

*water's for  
fightin'*

**--Mark  
Twain**

**Questions ?**